

(12) UK Patent Application (19) GB (11) 2 298 976 (13) A

(43) Date of Printing by UK Office 18.09.1996

(21) Application No 9607682.3

(22) Date of Filing 15.08.1995

(30) Priority Data

(31) PM7447

(32) 15.08.1994

(33) AU

(86) International Application Data

PCT/AU95/00493 En 15.08.1995

(87) International Publication Data

WO96/05582 En 22.02.1996

(71) Applicant(s)

Gilbert Alain Lindsay Garrick
8 Penton Place, Gilmore ACT 2905, Australia

Marie Jeanette Corrinne Garrick
8 Penton Place, Gilmore ACT 2905, Australia

(72) Inventor(s)

Gilbert Alain Lindsay Garrick
Marie Jeanette Corrinne Garrick

(51) INT CL⁶

G01R 31/36, G08B 17/10, H02J 9/00

(52) UK CL (Edition O)

H2K KDX KSX K254 K255 K453 K55Y K552 K616 K625
K634

H2H HAJ H25G H25Q

U1S S2192

(56) Documents Cited by ISA

US 4251811 A US 4139846 A US 4138670 A

(58) Field of Search by ISA

INT CL⁶ G08B 17/10

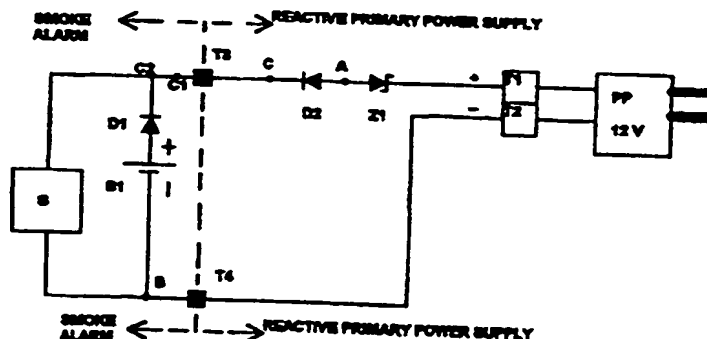
Online: JAPIO, WPI

(74) Agent and/or Address for Service

Withers & Rogers
4 Dyer's Buildings, Holborn, LONDON, EC1N 2JT,
United Kingdom

(54) Smoke alarm system with standby battery and reactive primary power supply

(57) A smoke detection and alarm system including one or more low cost battery operated smoke alarms (5) fitted with internal non-rechargeable standby batteries (B1), a reactive primary power supply derived from mains supply, and connecting means for connecting the reactive power supply to each of the system's smoke alarms, the system being characterized in that (1) said reactive primary power supply comprises: (a1) means for providing a d.c. supply of slightly higher than the smoke alarm standby battery voltage; and (a2) means for detecting the higher than quiescent current supplied by the reactive power supply when any of the smoke alarms connected as part of the system is in alarm or in self-test mode; and (a3) means of lowering the d.c. supply voltage made available to power the system's smoke alarms when a higher than quiescent current is detected; and (2) said smoke alarms comprise: (b1) means by which all the current required under quiescent condition, with primary power available, is supplied by the reactive primary power supply; and (b2) means by which a very high proportion of the current required when any of the system's smoke alarms is in self-test mode is supplied by the smoke alarm battery as the d.c. voltage of the reactive primary power supply drops in self-test mode; and (3) all the above system's characteristics resulting in: (c1) the condition of the standby battery of each smoke alarm being tested at regular intervals to provide an audible warning if the battery is depleted, disconnected or missing; and (c2) the standby battery of each smoke alarm supplying quiescent current only for very brief periods to result in the standby batteries having a longer life well in excess of the average one year life common with existing systems; and (c3) the system being of very low overall cost and of much improved reliability.



BEST AVAILABLE COPY

GB 2 298 976 A